THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
BUREAU OF AIR QUALITY CONTROL

REGULATIONS FOR THE CONTROL OF AIR POLLUTION

REGULATION 2 . PLANS APPROVAL AND EMISSION LIMITATIONS

Regulation 2. Plans Approval and Emission Limitations

2.1 General

2.1.1 No person shall construct, substantially reconstruct or alter any facility regulated herein that may cause or contribute to a condition of air pollution unless the plans, specifications, proposed Standard Operating Procedure and Proposed Maintenance Procedure for such facility have been submitted to the Department for approval and approval has been granted in writing.

(a) Application for approval to construct, substantially reconstruct, or alter any facility shall be made on forms furnished by the Department, or by other means prescribed by the Department.

(b) Each application shall be signed by the applicant.

(c) Each application shall be accompanied by site information, plans, descriptions, specifications, and drawings showing the design of the facility, the nature and amount of emissions, and the manner in which it will be operated and controlled.

(d) Any additional information, plans, specifications, evidence of documentation that the Department may require shall be furnished upon request.

(e) All plans and specifications submitted to the Department shall bear the seal and signature of a professional engineer registered in the Commonwealth under the provisions of Chapter 112 of the General Laws as amended. Such approval shall not affect the responsibility of the owner or operator to comply with other applicable regulations.

2.1.2 No approval will be issued in instances where:

(a) emissions from such a facility would result in air quality exceeding the

Massachusetts or National Ambient Air Quality Standards, or

(b) emissions from such facility would exceed the applicable regulatory emission limitations as specified in Regulation 2.5, or

(c) emissions from such a facility would result in violation of the provisions of any of these Regulations.

2.1.3 The Department will act within 60 days on an application and will notify the applicant in writing of its approval, conditional approval, or denial of the application. The Department will set forth its reasons for any denial. The Department may impose any reasonable conditions upon an approval, including conditions requiring the facility to be provided with:

(a) Sampling ports of a size, number, and location as the Department may require,

(b) Safe access to each port,

(c) Instrumentation to monitor and record emission data, and

(d) Any other sampling and testing facility.

2.1.4 The Department may cancel an approval if the construction is not begun within 2 years form the date of issuance, or if during the construction, work is suspended for 1 year.

2.2 Department Participation

The Department in its evaluation for approval of the design for construction, reconstruction, alteration, the Standard Operating Procedure and proposed maintenance procedure for any facility will limit itself to consideration of such matters which, in its opinion may cause or contribute to a condition of air pollution. The Department will consult upon request concerning design criteria and design of any facility prior to submittal of plans.

2.3 Application

Regulation 2, in its entirety, shall apply to fossil fuel utilization facilities having energy input capacities greater than three million (3,000,000) B.t.u. per hour: incinerators: industrial facilities, such as asphalt batching plants, foundries, chemical products manufacturing plants, petroleum products manufacturing plants, aggregate manufacturing plants, food and food plants, wood products plants, dry cleaning establishments, paint and varnish manufacturing plants, paper manufacturing plants, leather manufacturing plants, concrete manufacturing

plants and metal coating and treatment plants, and such other facilities as the Department may require.

2.4 Criteria of Application

When, in the opinion of the Department, any facility has a likelihood of causing or contributing to a condition of air pollution, the person owning, leasing, or controlling the operation of the facility shall, upon request by the Department, submit to the Department, plans, specifications, Standard Operating Procedure, maintenance procedure and such other information as may be necessary to determine the adequacy of application in said facility of air pollution control technology. If, after review of said information, the Department determines that the facility is in need of reconstruction, alteration, or repair to prevent it from causing or contributing to a condition of air pollution said facility may be temporarily continued in operation pending such reconstruction or repair if the person owning, leasing, or controlling the operation of the facility

(a) demonstrates to the satisfaction of the Department hardship or public need and

(b) agrees to submit plans and specifications for reconstruction, alteration, or repair of the facility and proposed Standard Operating Procedure for the reconstructed or altered facility to the Department within an agreed-upon reasonable period of time for the Department's review of and approval prior to the intended reconstruction, alteration, or repair and subsequent operation and

(c) indicates his intention to reconstruct, alter, or repair and thereafter to operate the facility in accordance with the plans specifications, Standard Operating Procedure and maintenance procedure as approved by the Department after submittal.

2.5 Compliance with Emission Limitations

2.5.0 Persons owning, leasing, or controlling the operation of any facility described in Regulation 2.3 (field of application) shall achieve full compliance, by January 31, 1974, with the regulatory emission limitation applicable to such facility or take the actions shown below:

(a) justify to the Department that additional time is needed and

(b) submit a proposed plan and compliance schedule for said facility to the Department not later than December 31, 1972.

Justification for additional time to comply with regulatory emission

limitations, and the submittal of proposed plans and compliance schedules are subject to review and approval by the Department and must provide for compliance with applicable regulatory emission limitations as expeditiously as practicable, but in no case later than July 31, 1975. All compliance schedules shall provide for periodic increments of progress including submittal of engineering plans, ordering of equipment after plan approval, installation date after confirmation of order by the manufacturer and the date by which the applicable regulatory emission limitation will be achieved after equipment is in satisfactory operation.

2.5.1 No person owning, leasing, or controlling the operation of any fossil fuel utilization facility shall cause, suffer, allow, or permit emissions therefrom in excess of those emission limitations set forth in the following tables and within the time schedules specified in Regulation 2.5.

Berkshire Air Pollution Control District – For purposes of this regulation critical areas of concern are defined as the cities and towns of Adams, Dalton, Lee, North Adams, Pittsfield

Central Massachusetts Air Pollution Control District – For purposes of this regulation critical areas of concern are defined as the cities and towns of Athol, Auburn, Boylston, Fitchburg, Gardner, Grafton, Holden, Leicester, Leominster, Millbury, Shewsbury, Southbridge, Webster, West Boylston, and Worcester.

Merrimack Valley Air Pollution Control District – For purposes of this regulation critical areas of concern are defined as the cities and towns of Haverhill, Lawrence, Lowell, and Newburyport

Metropolitan Boston Air Pollution Control District – For purposes of this regulation critical areas of concern are defined as the cities and towns of Arlington, Belmont., Boston, Braintree, Brookline, Cambridge, Canton, Chelsea, Dedham, Everett, Lynn, Malden, Medford, Melrose, Milton, Needham, Newton, Peabody, Quincy, Revere, Salem, Saugus, Somerville, Stoneham, Wakefield, Waltham, Watertown, Weymouth, Winchester, Winthrop and Woburn.

Pioneer Valley Air Pollution Control District – For purposes of this regulation critical areas of concern are defined as the cities and towns of Amherst, Chicopee, East Hampton, East Longmeadow, Greenfield, Hadley, Holyoke, Longmeadow, Ludlow, Northampton, Orange, Palmer, Springfield, Ware, Westfield, and West Springfield

Southeastern Massachusetts Air Pollution Control District – For purposes of this regulation critical areas of concern are defined as the cities and towns of

Attleboro, Fall River, New Bedford, Sandwich, Somerset, and Taunton

This emission limitation shall not apply to gas turbine or diesel engines.

EMISSION LIMITATIONS

Fossil Fuel Utilization Facilities

Particulates

Facility Size Million Btu/hr. Input	Emission Limitations lbs. (particulate)/million Btu		
	new	existing	existing (critical area of concern)
3 -250	0.10	0.15	0.12
greater than 250	0.05*	0.15	0.12

Any emission testing to be compared to these limitations must be conducted under isokinetic sampling conditions and in accordance with method 5, as specified in the Federal Register, Volume 36, No. 247, December 23, 1971, or by another method correlated to the above method to the satisfaction of the Department.

* An emission rate of 0.10 lbs. (particulate) per million Btu will be allowed if a person is using equipment designed to control or reduce sulfur dioxide at the same time or in the same process so that the provisions of Regulation No.5 are satisfied.

Oxides of Nitrogen

Facility Size Million Btu/hr. Input	Emission Limitations lbs. (particulate)/million Btu
	new
greater than 250	0.3

Any emissions testing to be compared to this limitation must be conducted in accordance with method 7, as specified in the Federal Register, Volume 36, No. 247, December 23, 1971, or by another method which has been correlated to the above method to the satisfaction of the Department.

2.5.2 No person owning, leasing, or controlling the operation of any industrial

facility shall cause, suffer, allow, or permit emissions therefrom in excess of those emission limitations set forth in the following tables and within the time schedules specified in Regulation 2.5.

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EMISSIONS LIMITATIONS

INDUSTRIAL FACILITIES

Particulates

	Emission Limitation lbs. (particutate)/1000 lb. flue gas		
	new	existing	existing (critical area of concern)
Ferrous Cupola Foundries			
Production	0.10	0.25	0.10
Jobbing	0.40	0.40	0.40
Non-Ferrous Foundries	0.10	0.15	0.10

Differentiation Between Jobbing and Production Foundries

Cupolas in a jobbing foundry will be run intermittently for just long enough at one time to pour the molds that are ready on the foundry floor job by job.

Production foundry cupolas will melt continuously to pour a succession of molds that are constantly being prepared to receive a continuous flow of iron.

Asphalt Batching Plants

Production Weight Tons/Hour	Emission Limitation lbs. (particulate)/hr.		
	new	existing	existing (critical area of concern)
100	4.5	9.0	4.5
150	6.7	13.4	6.7
200	9.0	18.0	9.0
250	11.3	22.6	11.3
300	14.2	28.3	14.2
350	15.9	31.3	15.9
400	18.1	36.2	18.1

Other Industrial Sources

Process Weight Pounds/Hour	Emission Limitation lbs. (particulate)/Hour		
	new	existing	existing (critical area of concern)
50	0.12	0.24	0.12
100	0.23	0.46	0.23
150	0.33	0.66	0.33
200	0.42	0.85	0.42
250	0.51	1.03	0.51
300	0.60	1.20	0.60
350	0.67	1.35	0.67
400	0.75	1.50	0.75
450	0.82	1.63	0.82
500	0.89	1.77	0.89
550	0.95	1.89	0.95
600	1.01	2.01	1.01
650	1.06	2.12	1.06
700	1.12	2.24	1.12
750	1.17	2.34	1.17
800	1.22	2.43	1.22
850	1.27	2.53	1.27
900	1.31	2.62	1.31
950	1.36	2.72	1.36
1000	1.40	2.80	1.40
1100	1.49	2.97	1.49
1200	1.56	3.12	1.56
1300	1.63	3.26	1.63
1400	1.70	3.40	1.70
1500	1.77	3.54	1.77
1600	1.83	3.66	1.83
1700	1.89	3.79	1.89
1800	1.96	3.91	1.96
1900	2.02	4.03	2.02
2000	2.07	4.14	2.07
2100	2.12	4.24	2.12
2200	2.17	4.34	2.17
2300	2.22	4.44	2.22
2400	2.28	4.55	2.28
2500	2.32	4.64	2.32
2600	2.37	4.74	2.37
2700	2.42	4.84	2.42

Other Industrial Sources (Continued)

Process Weight Pounds/Hour	Emission Limitation lbs. (particulate)/Hour		
	new	existing	existing (critical area of concern)
2800	2.46	4.92	2.46
2900	2.51	5.02	2.51
3000	2.55	5.10	2.55
3100	2.59	5.18	2.59
3200	2.64	5.27	2.64
3300	2.68	5.36	2.68
3400	2.72	5.44	2.72
3500	2.76	5.52	2.76
3600	2.81	5.61	2.81
3700	2.85	5.69	2.85
3800	2.89	5.77	2.89
3900	2.93	5.85	2.93
4000	2.97	5.93	2.97
4100	3.01	6.01	3.01
4200	3.04	6.08	3.04
4300	3.08	6.15	3.08
4400	3.11	6.22	3.11
4500	3.15	6.30	3.15
4600	3.19	6.37	3.19
4700	3.23	6.45	3.23
4800	3.26	6.52	3.26
4900	3.30	6.60	3.30
5000	3.39	6.67	3.39
5500	3.52	7.03	3.52
6000	3.69	7.37	3.69
6500	3.86	7.71	3.86
7000	4.03	8.05	4.03
7500	4.20	8.39	4.20
8000	4.36	8.71	4.36
8500	4.52	9.03	4.52
9000	4.68	9.36	4.68
9500	4.84	9.67	4.84
10000	5.0	10.0	5.00
11000	5.32	10.63	5.32
12000	5.64	11.28	5.64
13000	5.99	11.89	5.99
14000	6.25	12.50	6.25
15000	6.57	13.13	6.57

Other Industrial Sources (Continued)

Process Weight Pounds/Hour	Emission Limitation lbs. (particulate)/Hour		
	new	existing	existing (critical area of concern)
16000	6.87	13.74	6.87
17000	7.18	14.36	7.18
18000	7.49	14.97	7.49
19000	7.79	15.58	7.79
20000	8.10	16.19	8.10
30000	11.11	22.22	11.11
40000	14.15	28.3	14.15
50000	17.15	34.3	17.15
60000	20.0	40.0	20.0

Other Industrial Sources

When process weight exceeds 60,000 pounds per hour, emission rate should be determined as follows

existing sources $E = 55P^{0.11} - 40$

new sources $E = ½ (55P^{0.11} - 40)$

existing sources in critical areas of concern $E = ½ (55P^{0.11} - 40)$

P = Process weight in tons per hour
E = Emission rate in pounds per hour

Example of emission limitations for process weight rates greater than 60,000 pounds per hour are shown on the following table.

Process Weight	new	existing	existing (critical area of concern)
70000	20.7	41.3	20.7
80000	21.3	42.5	21.3
90000	21.8	43.6	21.8
100000	22.8	45.5	22.8
200000	25.7	51.3	25.7
300000	27.7	55.4	27.7

400000	29.3	58.5	29.3
500000	30.5	61.0	30.5
600000	31.5	63.0	31.5
700000	32.4	64.8	32.4
800000	33.2	66.3	33.2
900000	33.9	67.7	33.9
1000000	34.5	68.9	34.5

Any emissions testing to be compared to these limitations must be conducted under isokinetic sampling conditions and in accordance with method 5, as specified in the Federal Register, Volume 36, No. 247, December 23, 1971 or by another method which has been correlated to the above method to the satisfaction of the Department of Public Health.

EMISSION LIMITATIONS

INDUSTRIAL FACILITIES

Gases

Sulfur Dioxide	Emission Limitation
Contact Sulfuric Acid Plants	
new	4 lbs/ton acid produced
existing	27 lbs/ton acid produced
existing (critical area of concern)	27 lbs/ton acid produced
Other Sources	
new	25 lbs/hour
existing	25 lbs/hour
existing (critical area of concern)	25 lbs/hour

At no time shall emission concentration exceed 500 ppm.

Nitrogen Dioxide

All sources

new	10 lbs/hour
existing	20 lbs/hour
existing (critical area of concern)	10 lbs/hour

At no time shall emission concentration exceed 250 ppm.

2.5.3 No person owning, leasing, or controlling the operation of any incinerator facility shall cause, suffer, allow or permit emissions therefrom in excess of those emission limitations set forth in the following tables and within the time schedules specified in Regulation 2.5.

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EMISSION LIMITATIONS

Incinerators

Particulates

Incinerator Type	Emission Limitation (grains/SCF @ 12% CO_2)		
	new	existing	existing (Critical area of concern)
municipal	.05	.10	.10
commercial, industrial, residential	.10	.10	.10

Any emissions testing to be compared to these limitations must be conducted under isokinetic sampling conditions and in accordance with the method described by Subpart E – "Standards of Performance for Incinerators" as specified in the Federal Register, Volume 36, No. 247, December 23, 1971, or by another method which has been correlated to the above method to the satisfaction of the Department of Public Health.

Incinerator Type	Emission Limitation (g/kg dry sludge input)
	New or Modified
Municipal Sewage Treatment Facilities	0.65

Any emissions testing to be compared to these limitations must be conducted under isokinetic sampling conditions and in accordance with the method described by Subpart O – "Standards of Performance for Sewage Treatment Plants" as specified in the Federal Register, Volume 39, No. 47, March 8, 1974, or by another method which has been correlated to the above method to the satisfaction of the Department of Public Health.

2.5.4 Organic Material

2.5.4.1 Any person owning, leasing, or controlling a stationary tank reservoir with a capacity of greater than 40,000 gallons in which organic material having a true vapor pressure in the range of 1.5 to 11 psi inclusive is placed, stored, or held shall equip such a stationary tank reservoir with one of the following emission control devices or equal, within the time schedule specified in Regulation 2.5:

(a) A floating roof cover consisting of a pontoon type, double deck

type roof, or internal floating roof resting on the surface of the liquid contents equipped with a closure seal, or seals, to close the space between the roof edge and tank wall and, in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

(b) A pressure tank system maintaining a pressure at all times so as to prevent organic material loss to the atmosphere or

(c) A vapor recovery system capable of collecting the organic materials emitted from the tank and of disposing of these materials without release to the atmosphere and, in addition, all tank gauging and sampling devices shall be gas-tight except when in use or

(d) Other equipment equal to or greater in efficiency to the devices listed above, and approved by the Department.

2.5.4.2 Any person owning, leasing, or controlling a stationary tank reservoir with a capacity of greater than 40,000 gallons in which organic material having a true vapor pressure greater than 11 psi is placed, stored, or held shall equip such a stationary tank reservoir with one of the following devices or equal, within the time schedule specified in Regulation 2.5:

(a) A pressure tank system maintaining a pressure at all times so as to prevent organic material loss to the atmosphere or

(b) A vapor recovery system capable of collecting the organic materials emitted from the tank and of disposing of these materials without release to the atmosphere and, in addition, all tank gauging and sampling devices shall be gas tight except when in use or

(c) Other equipment equal to or greater in efficiency than the devices listed above and approved by the Department.

2.5.4.3 Any person owning, leasing, or controlling a loading rack with a daily throughput (1/300 of actual annual throughput) greater than 20,000 gallons which transfers organic material with a true vapor pressure of 1.5 psi or greater into tank trucks, trailers, or other contrivances shall equip such a loading rack with a vapor recovery system properly installed, well-maintained, and with a Standard Operating Procedure that has been approved by the Department, within the time schedule specified in Regulation 2.5. All loading connections on the vapor

lines shall be equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic material from the fittings. The provisions of this section shall not apply to the loading of motor vehicle fuel tanks.

2.5.4.4 Stationary Tanks – Submerged Fill Tubes

Any person owning, leasing, or controlling a stationary tank having a capacity greater than 250 gallons but less than 40,000 gallons into which motor vehicle fuels with a true vapor pressure of greater than 1.5 psi but less than 11.0 psi @ 60°F. is transferred from tank truck, trailer, or other contrivance shall be equip as follows:

All tanks over 250 gallons in place as of July 1, 1975 shall be equipped with submerged (drop) fill lines before January 1, 1976.

All tanks over 250 gallons installed after July 1, 1975 shall be equipped with submerged (drop) fill lines at time of installation.

These submerged fill lines shall be of such characteristics that the tanks can be converted to vapor recovery system operation before March 1, 1976 without replacement of the submerged fill line.

Submerged fill lines shall be 3 inches from the bottom of the tank for all tanks installed on and after July 1, 1975 but may be 6 inches from the bottom of the tank for all tanks installed before July 1, 1975.